

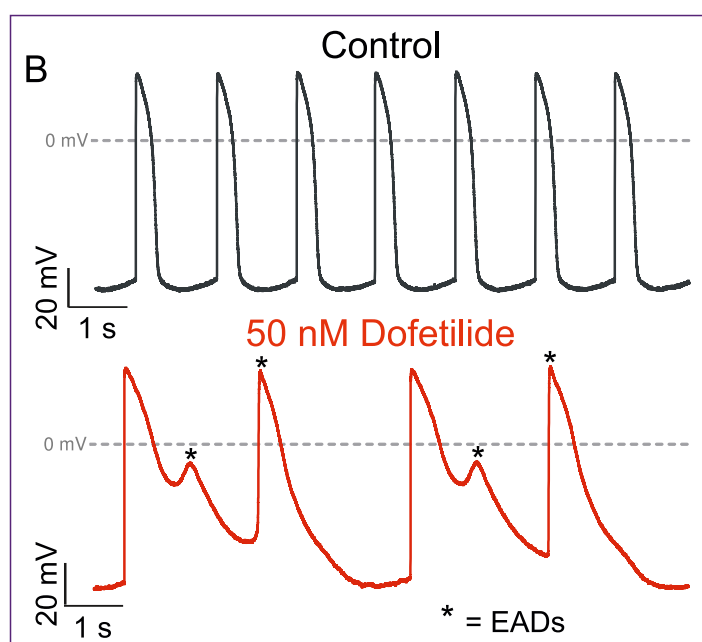
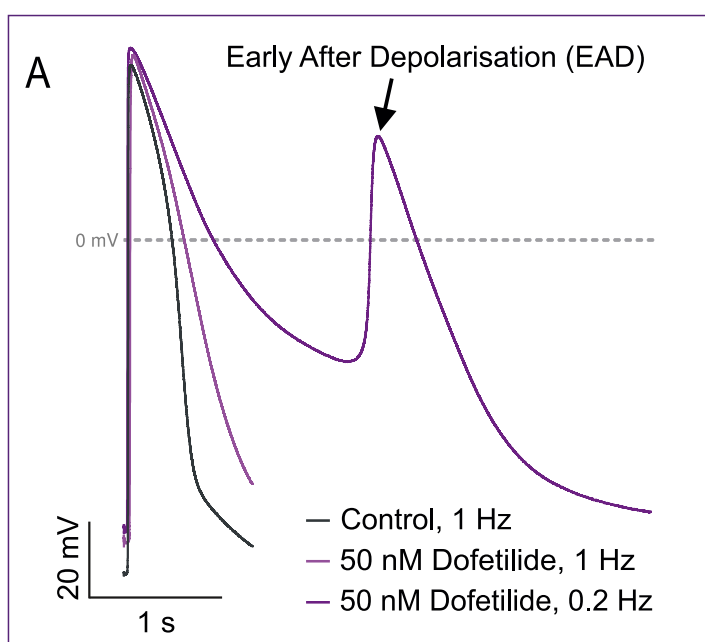
iPSC-Derived Cardiomyocyte Characterisation Services

At Metrion we offer comprehensive expertise in the characterisation of iPSC-derived cardiomyocytes (iPSC-CM). Our profiling services include determining action potential (AP) waveform parameters, quantifying key ionic currents, and generating reference compound pharmacology on both manual patch clamp and high-throughput plate-based platforms.

Manual Patch Clamp Assays

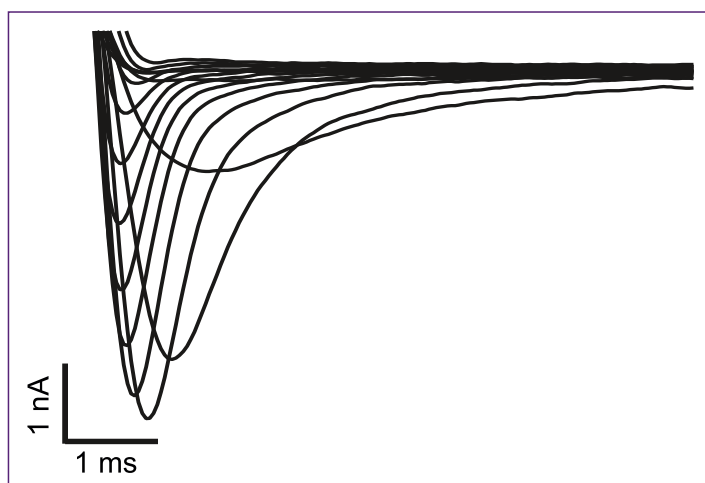
Current Clamp

Metrion can record stable APs from single cells and syncytial networks using current clamp electrophysiology. Spontaneous APs (A) and stimulated APs (B) can be acquired to enable the determination of drug effects on a wide range of AP parameters.



Voltage Clamp

We have extensive experience in achieving high quality gigaseal recordings to determine compound effects on native ionic currents in iPSC-CM. We have developed optimised assays to allow the quantification and pharmacological characterisation of key cardiac ionic currents.



Target	Reference compound
I_{Kr}	Dofetilide*, E-4031
I_{Na}	Lidocaine*, TTX
I_{Ca}	Nifedipine*
I_{NaL}	Ranolazine*
I_{Ks}	JNJ303*
I_f	Ivabradine*
I_{KACh}	Carbachol, Tertiapin Q
I_{Kur}	4-AP
I_{TASK}	ML365

* = Part of CiPA compound toolbox

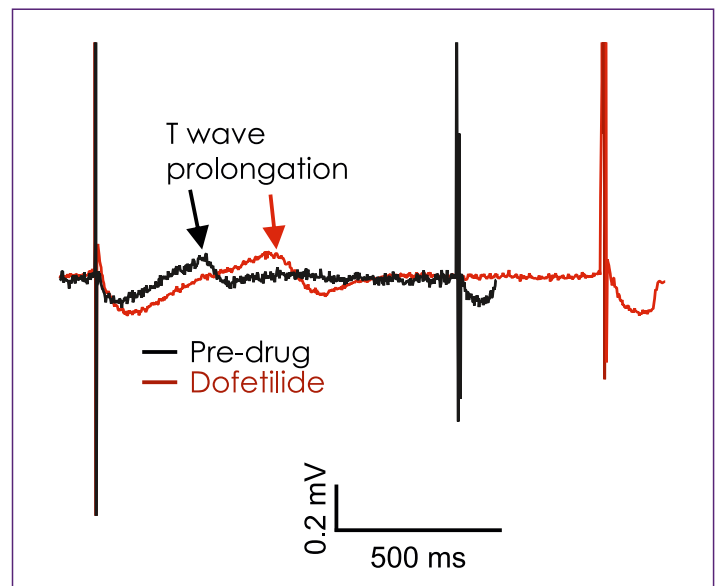
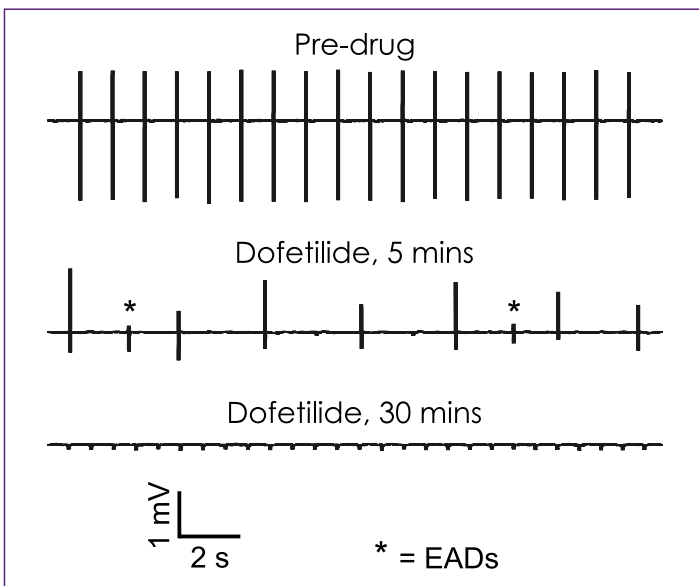
iPSC-Derived Cardiomyocyte Characterisation Services

Plate-based assays

Metrion can assess the suitability of your iPSC-CMs for use in plate-based cardiotoxicity assays to investigate the pharmacological profile of your iPSC-CMs using multi electrode array (MEA) and/or Impedance platforms.

MEA

Metrion has developed compound screening assays using an Extracellular Field Potential (EFP) readout on the Maestro MEA platform.



Impedance

Impedance recordings on the CardioExcyte 96 platform also provides information on the beating profile of iPSC-CM and a readout for cardiotoxicity.

